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# Current Support Brief

## SOVIET ANTITANK GUIDED MISSILE SYSTEMS NOW DEPLOYED IN CUBA, EAST GERMANY, AND IRAQ


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# SOVIET ANTITANK GUIDED MISSILE SYSTEMS NOW DEPLOYED IN CUBA, EAST GERMANY, AND IRAQ

The SNAPPER, a recently developed Soviet antitank guided missile system (see Figure 1, following p. 1), is believed to be widely deployed in the USSR and has been observed with Soviet armored units in Cuba. This system also probably is deployed in East Germany with both Soviet and East German forces and was scheduled to be delivered to Iraq. It may also be deployed in Yugoslavia. An even more recent version of the SNAPPER, the SWATTER (see Figure 2, following p. 1), was observed in the Moscow Parade on 7 November 1962, but there is as yet no evidence that this system has been deployed. Both the SNAPPER and the SWATTER appear to be highly mobile antitank weapons.

The SNAPPER and the SWATTER antitank guided missile systems (including both the launch vehicles and the guided missiles) have provided the infantry with a very effective, accurate, and economical antitank weapon system. These systems, however, probably will complement rather than replace the conventional antitank weapons such as the 85-millimeter (mm) and 100-mm gun. The SNAPPER and the SWATTER can engage tanks at ranges up to about 2,500 yards but have a minimum range of fire of about 600 yards because operator guidance of the missile can begin only after a particular point in the trajectory is reached.

A platoon of SNAPPER or SWATTER missiles can consist of either three or four launch vehicles each carrying four to six missiles. The platoon is believed to provide support for a regimental-size combat formation, but the weapon system can easily be adapted to various organizational structures.

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According to some Soviet [redacted] tacticians, the SNAPPER and the SWATTER are so effective in the destruction of enemy tanks that they have reduced the requirement for antitank defense considerably. These sources estimate the destruction probability of the SNAPPER and

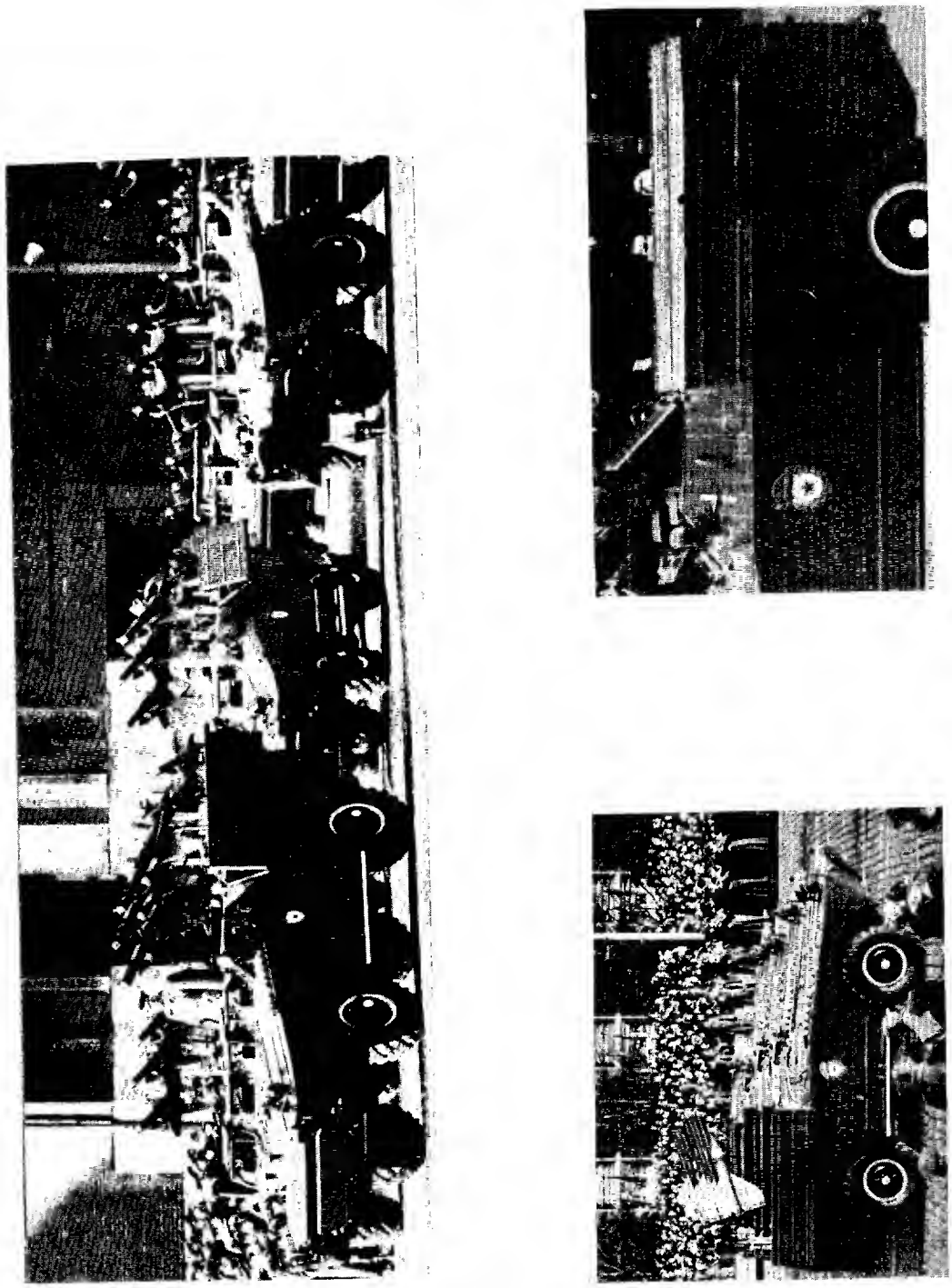


Figure 1. Soviet SNAPPER Antitank Guided Missile System

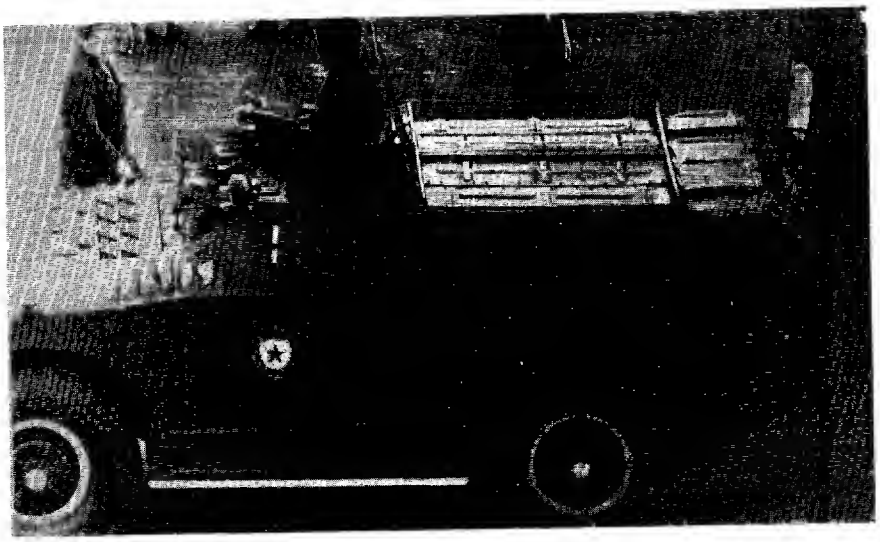



Figure 2. Soviet SWATTER Antitank Guided Missile System

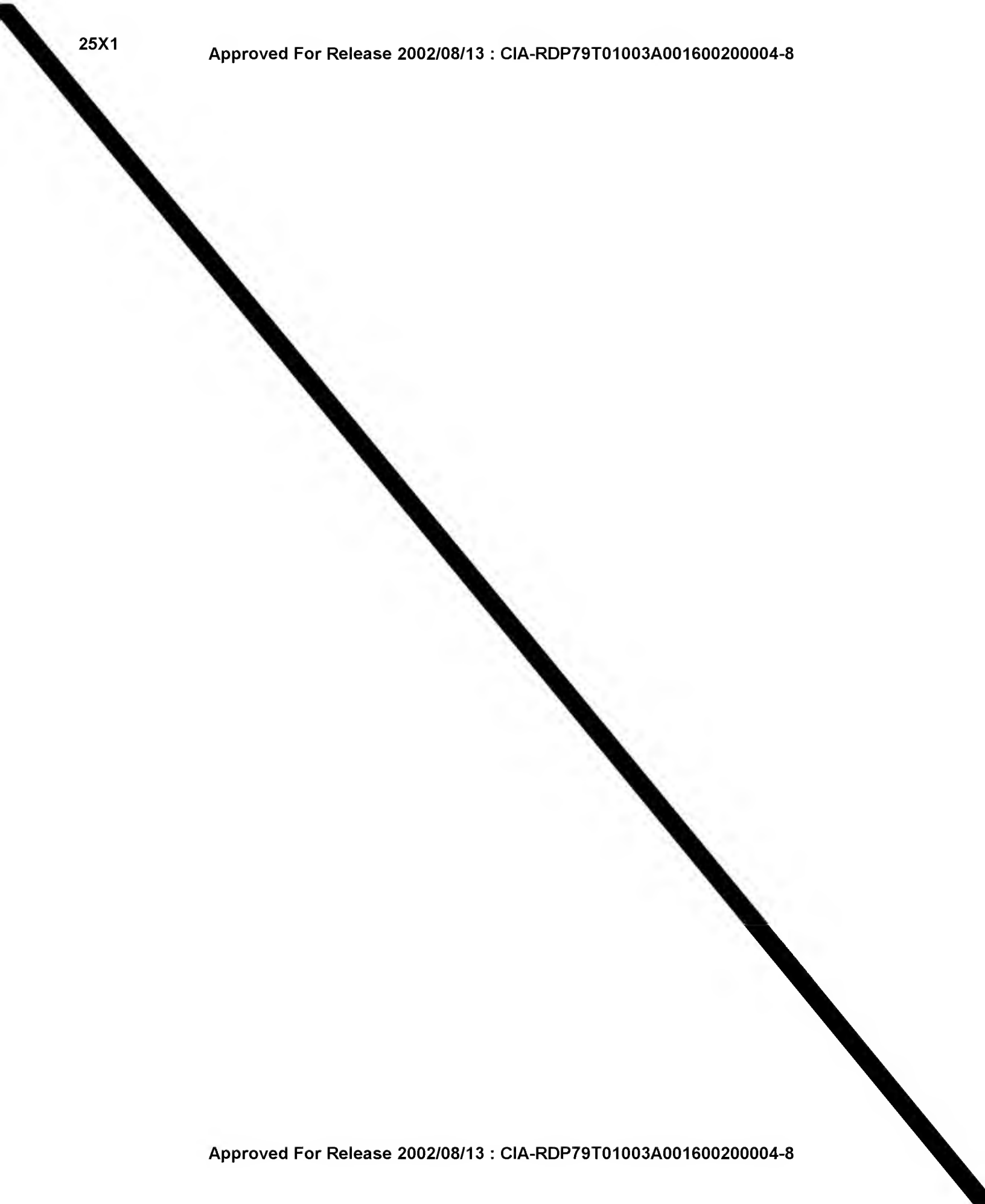
the SWATTER to be between 70 and 80 percent -- a very high average. During World War II a density of approximately 25 to 30 units (antitank guns and tanks) was required to cover 1 front-kilometer. These Soviet tacticians now believe that a single platoon of the SNAPPER or the SWATTER can repel the attack of an entire tank company (17 tanks), destroying not less than 40 to 50 percent of the tanks.

The great effectiveness of the antitank missile system, however, is not universally accepted by all Soviet military theoreticians. Some 25X1 [redacted] praise the capabilities and the effectiveness of the antitank missile system, whereas [redacted] the 25X1 hopes placed in antitank missiles as an effective means of combating tanks are subject to serious doubt. Some officials believe that if a large force of attacking tanks were to be encountered in battle, the striking power of the antitank missiles would be destroyed as soon as the first shots were fired. There also is some feeling that the SNAPPER and the SWATTER are more vulnerable to artillery fire than the heavily armored antitank artillery guns.

1. Deployment in Cuba, East Germany, and Iraq

It has been determined [redacted] that Soviet anti- 25X1
tank guided missiles are deployed in Cuba in conjunction with the Soviet
Battle Groups that arrived in August-September 1962 [redacted] 25X1
25X1 [redacted] 25X1

The SNAPPER was identified in East Germany [redacted] in a convoy 25X1
with elements of a Soviet motorized rifle regiment. Moreover, General Hoffmann, East German Minister for National Defense, told the recent East German Party Congress that antitank guided missiles had been introduced into the ground units of the East German Army. These weapons would be a logical replacement for the recoilless antitank



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rifle that apparently is being phased out of the East German units. Probably each motorized rifle regiment will receive one antitank guided missile platoon. In addition, [redacted] the number of antitank guns now is being cut down in the Group of Soviet Forces, Germany (GSFG). The absence in some units of the GSFG of the 85-mm auxiliary-powered antitank guns normally associated with an antitank company of a motorized rifle regiment supports the indications that at least some of the 85-mm guns are being phased out of these GSFG units and are being replaced by the SNAPPER. Whether or not the complete replacement of the 85-mm and 100-mm antitank guns by the SNAPPER will take place in either East German or GSFG units cannot be determined at this time. Some 85-mm or 100-mm guns are expected to be retained for use in conjunction with antitank missiles.

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Egypt and Indonesia also have been recipients of significant Soviet military aid. Up to the present time, however, there has been no indication of deployment of the SNAPPER in either of these countries.

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2. Organization of Field Units

25X1 [redacted] antitank launch vehicles* are to be deployed in platoons. Each platoon consists of three or four launch vehicles; each vehicle is stated to carry four to six antitank missiles. The manner in which SNAPPER/SWATTER antitank missile platoons will be fitted into the present organizational structure is not clear.

* The launch vehicle that is equipped to fire SNAPPER/SWATTER guided missiles is basically the standard Soviet reconnaissance vehicle (BRDM), a 4 x 4, wheeled, armored, amphibious weapon carrier.

25X1 [redacted] each East German motorized rifle regiment is to receive one antitank guided missile platoon. Because the East German Army organization is patterned after the Soviet Army, it can be inferred that Soviet organizational structure would be similar.

It is estimated that at the present time a motorized rifle regiment of the GSFG has six 85-mm antitank guns (one battery). The introduction of one platoon (one-half battery) of antitank missiles in East Germany is expected to replace at least one-half of the 85-mm guns in the regiment.

25X1 [redacted] hine SNAPPER launch vehicles are present at each of three of the four major Soviet encampments in Cuba. However, the Soviet Battle Groups in Cuba appear to follow no known Soviet standard pattern of organization and could therefore be specifically augmented units. Nine launch vehicles would equate to three SNAPPER platoons comprised of three launch vehicles each, or two augmented platoons comprised of four launch vehicles each plus one spare.

3. Characteristics of the SNAPPER System*

The SNAPPER, which was first observed in the Moscow Parade of 1 May 1962, is a remote-controlled, wire-guided missile system, similar to the French ENTAC, SS-10, and SS-11 antitank guided missile systems.** It is propelled by a double-base, solid-propellant rocket motor and can be wire guided from the vehicle or remotely controlled from a ground position. The warhead on the rocket is a shaped charge.***

The SNAPPER is small enough so that it can be hand carried, but it is usually mounted on a 4 x 4, wheeled, armored, amphibious launch vehicle. The missiles are mounted three abreast from a triple-rail pylon structure on the rear of the vehicle. The rear compartment of

* Table 2 follows on p. 6.

** These antitank guided missile systems also are used by the US Army.

*** A shaped charge is an explosive charge shaped so that the explosive energy is focused on one small area.

Table 2

Characteristics of the Soviet SNAPPER and SWATTER
and the French ENTAC, SS-10, and SS-11 Antitank Guided Missile Systems

| Characteristics | SOVIET | | FRENCH | | |
|---|---|---|---|---|---|
| | SNAPPER | SWATTER | ENTAC | SS-10 | SS-11 |
| Length (inches) | 44.4 | 42.3 | 31.9 | 33.9 | 47.3 |
| Diameter (inches) | 5.6 | 5.2 | 5.9 | 6.4 | 6.4 |
| Finspan (inches) | 30.6 | 27.5 | 14.8 | 29.5 | 19.7 |
| Weight (pounds) | 75 to 80 | 50 to 55 | 38 | 33 | 64 |
| Velocity (feet per second) | 400 to 500 | 450 to 550 | 260 | 260 | 360 to 625 |
| Minimum range (yards) | 500 to 600 | 500 to 600 | 220 | 325 | 550 |
| Maximum range (yards) | 2,000 to 2,700 | 2,000 to 2,500 | 2,180 | 1,750 | 3,800 |
| Warhead weight (pounds) a/ | 10 | 8 to 10 | 8.7 | 9 | 15.4 |
| Armor-piercing capability b/ (inches) | 19 | 16 | 24 | 19 | 25 |

a. Depending on the type of warhead used.
b. Depending on the type of warhead used and the angle of attack.

the vehicle in which the rockets are carried when not in the ready position is fitted with two hinged armored covers that run the full length of the rear compartment. When the covers are opened, the launchers are believed to be hydraulically raised into the firing position. Horizontal and vertical guidance can be conducted simultaneously, but horizontal guidance is quite limited in comparison with the US antitank systems.

4. Characteristics of the SWATTER System*

There is very little detailed information available at the present time on the SWATTER antitank rocket system, but it is believed to be simply a later model of the SNAPPER. The SWATTER is believed to be propelled by a double-base, solid-propellant rocket motor, but it has not been conclusively determined whether the rocket is wire guided or radio guided. The warhead observed on the SWATTER is believed to be a "squash head" type,** but a shaped charge capable of penetrating up to 16 inches of armorplate also could be used.

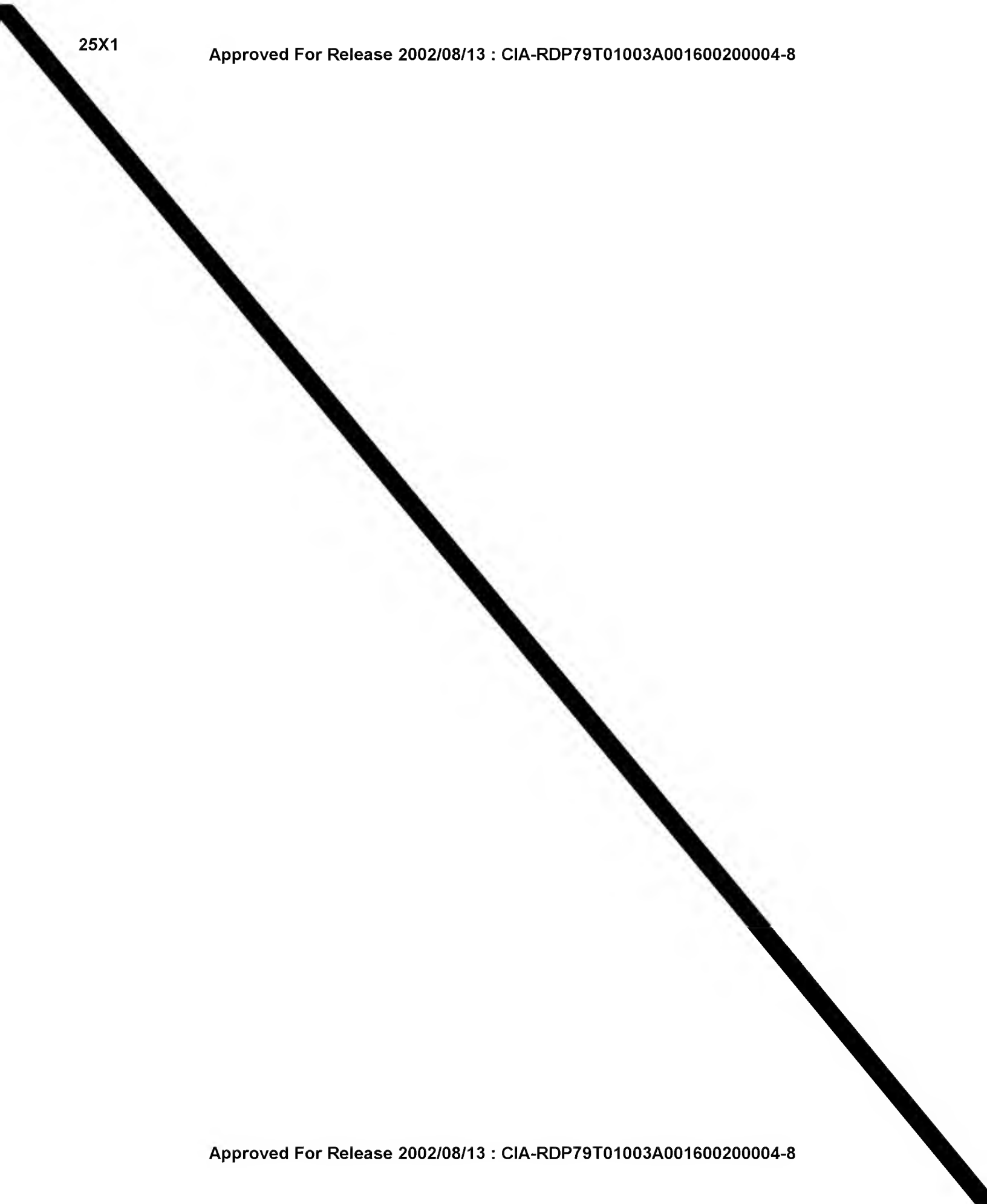
The SWATTER system, which was first observed in the Moscow Parade on 7 November 1962, is mounted on a launch vehicle very similar to the one on which the SNAPPER is mounted. The rockets are housed in the rear compartment of the vehicle when not in the ready position. The rockets in the SWATTER are mounted four abreast instead of three abreast as in the SNAPPER. The rear compartment is fitted with three hinged armored covers and the rear cover appears to serve as a blast shield when open.

A difference in configuration between the SNAPPER and the SWATTER vehicles is the existence of only two hinged armored covers in the SNAPPER launch vehicle, whereas there are three such covers in the SWATTER launch vehicle. The third cover on

* P. 6, above.

** A "squash head" is a thin-walled projectile filled with a plastic explosive. The projectile is designed to "squash" against the armorplate before detonation, and this action results in spalling of the armorplate within the tank, resulting in damage to the personnel and mechanisms inside the tank.

the SWATTER flips over to form a blast shield at the rear of the vehicle during operations. In addition, the SWATTER launch vehicle has a probable optical tracking device mounted above the right side of the launch vehicle. This device, a clear optical glass about 7 by 5 inches, was observed uncovered on 1 May 1963 in the Moscow Parade.



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